What Can We Learn from a War We Lost? The Relevance of the Vietnam Experience for Today's Assault Helicopter Doctrine

Major Frank T. Taddonio
Aviation

School of Advanced Military Studies
U.S. Army Command and General Staff College
Fort Leavenworth, Kansas

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Following a historical review of the development of airmobility leading to the early employment of airmobile units in Vietnam, the study analyzes the conduct of LAM SON 719, a combined operation conducted into Laos in 1971. The analysis reveals numerous doctrinal principles adhered to during the operation. The study also reviews the development of airmobile doctrine including the impact of the Vietnam War on its development.

The conclusion of this study is that the Vietnam experience does, indeed, provide valuable lessons which may be useful today and in the future. The analysis of current doctrine reveals that, although adequate, today's

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Major Frank T. Taddonio
Aviation

School of Advanced Military Studies
U.S. Army Command and General Staff College
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School of Advanced Military Studies
Monograph Approval

Name of Student: Frank T. Taddonio, Major, Aviation

Title of Monograph: What Can We Learn From A War We Lost? The Relevance of the Vietnam Experience for Today's Assault Helicopter Doctrine

Approved by:

Thomas G. Fergusson
(LTC Thomas G. Fergusson, Ph. D.) — Seminar Leader

Richard Hart Sinnreich
(COL Richard Hart Sinnreich, MA) — Director, School of Advanced Military Studies

Philip J. Brookes
(Philip J. Brookes, Ph. D.) — Director, Graduate Degree Programs

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SECTION I

INTRODUCTION

Army Aviation is a relatively young branch in the U.S. Army. Although officially designated as a separate branch on April 12, 1983, its roots extend back to June 6, 1942 when the Secretary of War approved an organic fixed wing aviation unit, separate from the rapidly growing Army Air Corps, for the field artillery to perform observation missions.(1) In November of that year, U.S. Army field artillery light observation aircraft experienced combat as four L4's flew from the aircraft carrier, USS Ranger, in the western Mediterranean to Casablanca. Aircraft recognition problems and role unfamiliarity caused one of them to be shot down by friendly fire. As coordination improved with ground forces, the use of these aircraft expanded to include controlling of Army Air Corps attack aircraft and conducting surveillance.(2)

Development of the Army's aviation assets struggled through twenty years and two major wars, World War II and Korea. Any conceptual seeds which may have been planted during the Korean War were unable to grow during the years when the U.S. strategy of massive retaliation was dominant. Emphasis on nuclear weapons coupled with interservice competition for limited funds stifled the ideas possessed by Army leaders concerning airmobility. Despite all of the overwhelming hurdles encountered during the decade following 1950, there were enough persevering visionaries to advance the concept of airmobility into the 1960's.(3)

However, the concept was still growing as the first airmobile units entered combat action in Vietnam.

Other than the recent U.S. military involvement in Grenada, the Vietnam conflict is the only major source of combat experience from which the U.S. Army can develop assault helicopter doctrine.(4) This is an extremely valuable point to remember as today's Army leaders plan for the employment of aviation in tomorrow's battles. Unlike infantry, armor, and other branches, the U.S. Army aviation community is able to derive very little in the way of doctrinal lessons from the U.S. Army's combat experience in World War II and Korea, particularly as pertains to airmobility and air assault operations. The helicopter, after all, did not make its appearance on the battlefield with the U.S. Army until the Korean War, and even then, it was used exclusively for command and control, liaison, medical evacuation, and limited observation. Extensive war gaming, analysis, testing, and realistic training in the field will significantly assist in the development of doctrine. However, the most reliable measure by far is actual combat.

THE PROBLEM

The negative connotations of the Vietnam War may be obscuring any combat-derived doctrinal lessons collected to date. Indeed, as the title of this paper suggests, the Vietnam War was lost. If any question of this fact exists, one merely needs to remember that Saigon is now called Ho Chi Minh City and that it is the North Vietnamese flag which flies in that city

today. Numerous volumes exist which cover that subject and its underlying causes. Faulty political aims and strategic errors are subjects discussed elsewhere. The continuing debate over these emotional issues may well overshadow important military doctrinal lessons requiring study. According to Shelby L. Stanton, noted historian and Vietnam combat veteran, "When the war was finally over, the United States military had to build a new volunteer army from the smallest shreds of its tattered remnants."(5) As the Army exited Vietnam, many wanted to forget the nightmare which haunted their lives for many years.

Today's emphasis on mid to high intensity combat and focus on the European battlefield may also be diminishing the importance of lessons learned in Vietnam. During 1972, the focus of the U.S. Army tactical doctrine shifted dramatically from counterinsurgency to conventional warfare. According to General Donn A. Starry, who was at the time Commander, U.S. Army Training and Doctrine Command (TRADOC), "...we decided to begin with developing operational concepts to cope with our most difficult problem, the mechanized war."(6) The Middle East War of 1973 served to intensify the Army's interest in a mechanized war in Europe. The increased level of sophistication and lethality of weapons on that battlefield emphasized the need for advanced technology in weapons development.

In this era of high technology systems and solutions to problems, it is understandably difficult to recall and effectively utilize the simple basic methods and tools used over a decade ago. Command and control, as well as fire support systems, have significantly capitalized on the advancements of computer technology. The Army is currently integrating

highly sophisticated tank killers such as the Apache (AH-64) helicopter. As we refine our capability to deal with the Soviet/Warsaw Pact threat on the plains of Europe, are we losing or simply ignoring the important data collected during combat with a less sophisticated enemy in Southeast Asia?

It is quite possible that while the U.S. Army prepares for the most dangerous and demanding, yet least likely, war, very little attention is focused on the most likely possibility - low intensity conflict. As Major General Dave R. Palmer, formerly the Deputy Commandant of the U.S. Army Command and General Staff College and now commanding the 1st Armored Division, in his widely praised history of the Vietnam War, wrote, "One of the essential ingredients of preparedness, therefore, is a diligent and honest study of the past, an intellectual examination of historical successes and failures." He further explained, "We did many things right in Vietnam. And many wrong. Those lessons must not be lost. The errors must not be ignored - to be repeated."(7)

PURPOSE

The primary purpose of this monograph is to determine if the Vietnam experience may be used meaningfully in the development of the U.S. Army's assault helicopter doctrine for today and for the future. Consideration must be given to the appropriateness of the Vietnam conflict to the development of assault helicopter doctrine for tomorrow. This is especially significant since the U.S. Army force structure now contains light infantry divisions designed for low intensity conflict. The intent of the research is to demonstrate the value of the airmobile concept as it was developed and practiced in Vietnam for today. If the Vietnam

experience provides a meaningful basis for doctrine, then by all means, it should be incorporated into the manuals we use today. It is imperative that a reliance on technology and the emphasis on tomorrow's mid to high intensity battlefield not cause a disregard for lessons learned in yesterday's war.

SECTION II

EARLY DEVELOPMENTS

During the 1950's, Army aviation was marked by a lack of direction for growth and development. On January 15, 1960, the Army Chief of Staff appointed Lieutenant General Gordon B. Rogers, Deputy Commanding General of Continental Army Command, to chair the Army Aircraft Requirements Board. The Rogers Board, often overshadowed by later developments, laid the foundation for a significant building process which occurred during the following decade. It outlined detailed requirements regarding three types of aircraft - observation, surveillance and transport. Also, the board's report included two key recommendations. First, it recommended a replacement policy for aircraft of every ten years, recognizing the need to keep up with operational requirements and advancing technology. Secondly, the board recommended that a study be conducted to determine whether the concept of air fighting units was practical. This concept recognized the possibility of tactical units capable of using the "third dimension" for combat, incorporating their own organic aircraft including, possibly, armed helicopters. The Rogers Board provided the necessary guidance for the development of aviation, procurement of material, and personnel planning for the future.(8)

Secretary of Defense, Robert S. McNamara, in the spring of 1962, directed that Lieutenant General Hamilton H. Howze, then Commanding General of Strategic Army Corps and XVIII Airborne Corps, convene the "Tactical

Mobility Requirements Board." Totally dissatisfied with previous studies conducted by the Army, McNamara advised all members of the board to study aviation requirements of the Army unconstrained by traditional military doctrine.(9) Lieutenant General John J. Tolson, an avid proponent of airmobility and noted aviator, indicated that, "The most significant major activity of the Board throughout its deliberations was the investigation, testing and evaluation of the organizational and operational concepts of airmobility."

Although the Howze Board conducted its exhaustive testing and evaluation within the constraints of a very short suspense (ninety days), the implications of the findings were far reaching. It recommended the creation of two types of completely airmobile combat units, air assault divisions and air cavalry combat brigades. The board also advocated additional reconnaissance and lift capability. A proposal was also made to substantially increase the number of aircraft in a ROAD division to enhance its mobility.(10) General Howze emphasized the board's significance by stating,

> The board has only a single, general conclusion, adoption by the Army of the airmobile concept - however imperfectly it may be described and justified in this report - is necessary and desirable. In some respects the transition is inevitable, just as was that from animal mobility to motor.(11)

Half way around the world, the struggle with the shortcomings of the airmobility concept was ongoing.

The first two Army aviation units, the 57th Transportation Company (Light Helicopter) and the 8th Transportation Company (Light Helicopter), arrived in South Vietnam on December 11, 1961. While the airmobility

concept was studied, tested, and evaluated in the United States, these units, along with others that followed, adapted themselves under combat conditions. Characteristic lessons were those learned during LAM SOM I and LAM SOM II. These two operations were conducted in August 1962, the same month that General Howze delivered his final report.

LAM SOM I was an airmobile raid, conducted by 1 Corps (Army of the Republic of Vietnam), which was designed to kill or capture any enemy encountered, destroy supplies and equipment, and seize enemy documents. It called for a thirty minute air strike by twenty-one fixed wing aircraft to precede the airmobile landing of a 200-man main force. A thirty man diversionary force, as well as a dummy parachute drop, were also employed. The airmobile assets were twenty-two CH-21's of the 93rd and 8th Transportation Companies and ten CH-34's of the Vietnamese Air Force. This operation was highly successful. The main force was on the ground for only 3 1/2 hours. There were twenty-two enemy killed in action and only three friendly troops wounded (one later died). Even with this success, there were mishaps. The Commander, I Corps (ARVN), attempted to use a C-47 for an airborne command post; however, he was unable to establish contact with subordinates due to a confusion of frequencies. Also, a miscount during the extraction almost caused the aircraft to return to the pickup zone.

LAM SOM II was planned in much the same manner as the previous operation, but weather became a significant factor. Fog in the objective area caused a long delay between the preparatory fires and the airmobile landing. The loss of surprise caused every aircraft to be hit by ground fire and two CH-21's to be destroyed. The operation lasted eight hours resulting in two South Vietnamese being killed and four Americans wounded.

Fifty-two enemy were killed, eight captured and tons of enemy food, clothing, weapons and ammunition destroyed in addition to the capture of valuable documents. One enemy prisoner indicated that the battalion had been preparing to attack a government outpost for the previous nine days.

It was soon apparent to all, including the enemy, that the airmobile raid was a practical means of contacting and surprising a numerically superior enemy. The South Vietnamese and the aviation units were learning quickly about the selection of landing zones. The importance of compromise between landing too far from the objective, forfeiting surprise, and landing too close, placing the aircraft in a vulnerable position, was a key lesson. They also learned about the necessity of employing all available firepower to protect the helicopters arriving and departing from landing zones.(12) As the period of "trial and error" and innovation continued for Army aviation units in Vietnam, the concept of airmobility was about to take a giant leap forward.

The 11th Air Assault Division was activated to test concepts outlined earlier by the Howze Board. Brigadier General Harry W.O. Kinnard was selected to lead the division through this intensive period of training, testing and evaluation which continued from 1963 to 1965. Men and equipment were brought together at Ft. Benning, Georgia from all around the Army. In the absence of any existing doctrine, the division worked intensely to develop procedures in many areas including formation flying, night formations, nap of the earth flight and forward area refueling operations.(13) As Lieutenant Colonel (later General) John R. Galvin noted, "There were no training texts or standard operational methods; these had to be formulated as the division grew."(14) The diligent effort

and perseverance of all members of the test division paid big dividends. Lieutenant General C.W.G. Rich, who had overall responsibility for testing the concept, submitted his interim final report on December 1, 1964. He recommended strongly that an air assault type division be included in the Army's force structure.(15) This report, in conjunction with other tests and studies including the "Aviation Requirements for the Combat Structure Of the Army (ARCSA I) Study", led to the tentative decision in March 1965 to convert the 11th Air Assault Division (Test) to a full-fledged member of the force structure.(16)

All of the preceding events led directly to the activation of the 1st Cavalry Division (Airmobile) on July 1, 1965. One month later, twenty troop and cargo ships carried the men and aircraft of the division to the hostile environment of South Vietnam.(17) Less than ninety days after its activation at Ft. Benning, the unit arrived in the central highlands of South Vietnam and established a base of operations astride Highway 19 at An Khe. Although separate helicopter companies had conducted airmobile operations in Vietnam since December 1961, the arrival of the 1st Cavalry Division (Airmobile) was significant in that it was a unit specifically designed for airmobile warfare.(18)

After only three weeks of small unit operations, the 1st Cavalry Division (Airmobile) committed its units to a test of the airmobile concept under fire. In an attempt to cut South Vietnam in two, the North Vietnamese Army launched attacks against the Plei Me Special Forces camp, south of Pleiku. The division entered the action with the mission to search and destroy over a 1500 square mile battlefield. Operation SILVER BAYONET lasted thirty-five days and later became known as the Ia Drang

Valley campaign. The division used its airmobile flexibility to the maximum advantage and defeated three North Vietnamese regiments in open combat.(19) During the course of this campaign, the division improved its employment of aerial rocket artillery, tube artillery and tactical air, learned the value of pathfinders, and demonstrated its ability to move entire infantry battalions and artillery batteries. All these lessons were at the cost of fifty-nine aircraft hit by enemy fire, three while on the ground, and only four shot down (three were recovered).(20) The division had passed its first test with flying colors. Many of the lessons learned in this initial combat improved future operations and enhanced the development of airmobility.

A review of the 1963 and 1967 versions of Field Manual 57-35, Airmobile Operations, indicates significant evolution in techniques and procedures occurred over those four years. These two editions clearly reflect the change in overall U.S. strategy in that the 1963 version indicates that it is applicable to nuclear warfare whereas the later manual refers to nonnuclear warfare. The experiences of combat in Vietnam are woven throughout the 1967 manual. Its list of missions adds riverine operations, long range patrols, and others typical of counterinsurgency to the mission list of the 1963 manual. Additional guidelines for command and staff reconnaissance, coupled with a very extensive discussion of aerial reconnaissance and surveillance within the intelligence section, resulted from fighting an elusive enemy in Asia. Another significant improvement in the 1967 edition was the very detailed outline of battle drills, including specific diagrams which explained escort duties, actions on contact, formation changes, and even seating configuration for the infantry. Use of

pathfinders and the selection, preparation, and operation of landing zones were expanded and covered in detail. The doctrine writers in 1967 were conscious of the valuable lessons being learned through combat experience in Vietnam and quickly incorporated them into the Army manual for airmobile operations.

The tactical lessons were learned constantly from the first commitment of support to South Vietnam. Initially, Army aviation's role was to train the Army of the Republic of South Vietnam (ARVN) units and, when necessary, to provide them with mobility, communications, and command and control superior to that of the Viet Cong. The aviation units also provided administrative support to military advisory group training teams.(21) As General Tolson points out, this early support "represented the lowest order of airmobility...that is, simply transport people from point "A" to point "B"."(22) Many problems existed because the pilots were excluded from the planning stages, did not control the tactical air support or artillery, and did not share responsibility for success or failure of the mission.(23)

The planning and conduct of airmobile assaults rapidly improved as combat experience was gained. Planning for these operations was normally initiated when the aviation battalion was assigned a mission by higher headquarters. These mission requests were passed to the aviation company assigned to support the operation. Although the companies possessed the flexibility to respond to missions in less than an hour, normally daily mission requirements were received by 1800 hours on the previous evening. If sufficient time was available, an aerial reconnaissance was conducted by members of the aviation company and the supported unit. During the reconnaissance, details concerning the pickup zone, routes, altitudes,

landing zones and flight formations were coordinated. Any deviation from the plan, either prior to or during the conduct of the mission, was coordinated with the ground force commander.(24) Liaison officers (LNO's) performed a key function in planning and conducting these missions. Officers from the aviation unit supporting the airmobile would coordinate directly with the supported ground unit. In addition to the aerial reconnaissance, liaison officers would plan for the refueling requirements, mess and medical support. During the execution phase, one LNO would fly in the lead aircraft and another would often fly above and behind the flight. Something that has been forgotten today in aviation units, which was discovered early in Vietnam, was the need for liaison officers to be the best qualified and most experienced officers. As this planning process improved, units refined their air movement techniques.

Formation flying was employed enroute to the landing zone or objective area. The most common formation used was a "V" of three to five aircraft. This facilitated the disembarkation of troops. Armed helicopters were always employed in an escort role to protect the troop carrying helicopters. Scout helicopters normally assisted in marking the landing zone with smoke and remained in the area for radio relay and to assist with rescue missions. Units learned very early that using the same route more than once often caused aircraft to be hit by ground fire. The use of different routes to and from the landing zone, as well as primary and alternate routes became the norm. This logic also applied to repetitive use of the same landing zones. Single ship landing zones were not used and the use of the same landing zone over and over again was avoided. These

and many other improvements were made by aviation units in order to adjust to their environment.

This environment did not significantly change until the latter years of the war. There were two major reasons for this change. First, in 1969, the decision was made to withdraw U.S. military forces. This required buildup of the South Vietnamese military. Vietnamization, as it was called, changed the focus of combat operations. Second, as a result of the arrival of U.S. combat troops in 1965 and extremely high losses of Viet Cong guerilla forces, contact with North Vietnamese Army (NVA) regular forces had increased. The NVA forces employed more sophisticated weapons which caused a mid-intensity air defense environment in some areas. The war in South Vietnam is often thought of only as low intensity conflict,... and one isolated in place and time. Although it contained many of the elements of low intensity conflict, any point of view which considers the whole conflict as low intensity fundamentally misunderstands the nature of that very difficult war. Many actions which occurred possess implications for today and the future. One major operation, similar to other battles in many ways, points out the progress made in the conduct of airmobile assaults. The 1971 incursion into Laos exposed Army aviators to a formidable air defense environment. Their participation in LAM SON 719 certainly put the airmobile concept to the test.

SECTION III

ANALYSIS OF LAM SON 719

INTRODUCTION TO THE BATTLE

LAM SON 719 was a combined operation conducted into Laos from February 8th to April 9, 1971. The mission was to destroy supplies and installations, disrupt lines of communications and destroy NVA forces. The operation was executed by United States Army forces and forces of the Army of the Republic of Vietnam (ARVN) against forces of the Viet Cong and North Vietnamese Army (NVA). United States Air Force elements also took part in the operation. The location of the operation was the northern two provinces of South Vietnam and the area in Laos adjacent to these provinces.

THE STRATEGIC SETTING

The long years of American involvement in the Vietnam War reached a major turning point when Richard M. Nixon became the President of the United States. His meeting with the President of the Republic of South Vietnam in June of 1969 concluded with the announcement of the redeployment of American forces from Vietnam as an integral part of Nixon's program of "Vietnamization". This program called for the turning over of the conduct of the war to the soldiers of the Republic of Vietnam. Outlining the two

principal components of Vietnamization, President Nixon concisely summarized the new American policy:

> The first (component) is the strengthening of the armed forces of the South Vietnamese in numbers, equipment, leadership and combat skills, and overall capability. The second component is the extension of the pacification program in South Vietnam.(25)

As the development of the Vietnamese forces progressed, the size and role of the U.S. Army declined so that as the year 1971 began only six of the ten divisions deployed to Vietnam were still there.

This transition within the borders of the Republic of Vietnam was accompanied by serious developments outside its borders. After a successful coup in March of 1970, General Lon Nol assumed control of the government in Cambodia. He immediately directed the NVA and the Viet Cong, who had long exploited Cambodia's neutrality, to leave his country. North Vietnam reacted with a series of operations launched into Cambodia to establish a line of communications. Responding to a request for assistance from Lon Nol, a combined American-South Vietnamese cross border operation was launched in May 1970.

By many accounts, the Cambodian Campaign was highly successful. "By 30 June 1970, which was the deadline for United States forces to withdraw from Cambodia, Allied forces had eliminated 5,000 enemy troops, and captured 9,300 tons of weapons, ammunition and assorted supplies, and 7,000 tons of rice. Most enemy bases had been overrun and destroyed."(26) However, Stanley Karnow, well known journalist and author, noted that the Communists were able to replace their lost equipment with the support of the Soviet Union and China. He further states that their strategic focus then shifted to the northern provinces of South Vietnam.(27) Regardless of

opinions, it is a fact that a large region of South Vietnam was now secure and that up to a year of time had been bought as the enemy would be unable to return until after the monsoon season.

With the bases in Cambodia virtually eliminated, the commanders in North Vietnam realized it was necessary to reinforce those units in Laos. In order to accomplish this task, the NVA would have to rely heavily on the Ho Chi Minh Trail.(28) Allied intelligence discovered this build up in the area west of Khe Sanh. The planning for another cross border operation commenced to retain the initiative seized in 1970 and disrupt the Communist buildup. This time, the incursion would be into Laos.

THE TACTICAL SITUATION

The operational area (see Appendix A) for LAM SŪN 719 was the Tchepone District of Savannakhet Province, in southeastern Laos.(29) The area was bounded on the east by Quang Tri Province, South Vietnam, with the Demilitarized Zone and Quang Binh Province, North Vietnam immediately northeast. The depth of the operational area was limited to Tchepone in the west, and width of the area varied from ten to twenty kilometers north and south of Route 9 in Laos.(30)

Weather had a major effect on the timing of airmobile operations in support of LAM SON 719. Weather conditions at three locations directly affected airmobile operations: (1) at coastal base camps where most helicopters were kept at night, (2) at the forward staging area at Khe Sanh, where only a few helicopters remained overnight, and (3) in the operational area over Laos. Early morning fog, rain, and cloud cover

sometimes delayed airmobile and tactical air operations until late morning or early afternoon. Sharply reduced visibility caused by a combination of natural haze, smoke, and dust raised by artillery and air strikes caused flying safety hazards and complicated command and control of aircraft.(31)

The geography of the operational area was varied. The Xe Pon River valley was central to the area, parallel to Route 9 on its north bank, generally running east-west from the Laotian border to Tchepone. (See Appendix A) Because of the rugged terrain adjacent to the river, and weather conditions, the Xe Pon River became a valuable navigational aid for aircraft. The area north of the river was restricted to infantry operations because of heavy vegetation and broken terrain. Two distinct terrain features south of the river, the Co Roc Highland and a high escarpment, influenced military operations. These prominent features dominated Route 9 and provided excellent observation into the Khe Sanh and Tchepone areas. This area also contained heavy vegetation which provided for excellent cover and concealment. This factor, coupled with the numerous trails throughout the area, provided the NVA the capability to move undetected.

LAM SQN 719 was conducted and controlled by I Corps (ARVN), commanded by General Hoang Kuan Lam.(32) The corps was augmented by the 1st Airborne Division (ARVN) (three brigades with nine infantry battalions and Division Artillery) and two Marine brigades with another Marine Brigade and its division headquarters available if necessary. XXIV Corps (U.S.), commanded by Lieutenant General James W. Sutherland, planned and coordinated all U.S. support for the operation.(33) Two significant factors influenced the forces committed to the operation. First, U.S. ground force were not

permitted to cross the border into Laos. Second, no U.S. advisors were allowed to participate with their respective Vietnamese units. Therefore, the extensive U.S. support involved in the operation required extremely detailed planning and coordination since this would be the first time in many years that major South Vietnamese ground units would be completely on their own.

During the conduct of the operation, airmobility support was recognized as an essential requirement for success. In addition to continuing missions in its assigned area of operations, the 101st Airborne Division (Airmobile) was tasked with the responsibility of providing command and control of all aviation elements in support of LAM SON 719. In order to support three division equivalents over extended distances (one way from Khe Sanh to Tchepone was fifty-three kilometers) the division required augmentation. It was augmented with four Assault Helicopter Companies (UH-1H), two Assault Support Helicopter Companies (CH-47), two Air Cavalry Troops, and two Assault Helicopter Battalion headquarters, all detached from other divisions. The commander of the 101st Aviation Group (see Appendix B) exercised operational control over all assault, assault support, and aerial weapons helicopter units. He was able to assign responsibility of direct support for each major ARVN unit to a separate assault helicopter battalion.

The enemy forces in the area of operations prior to the initiation of LAM SON 719 (see Appendix C), consisted of 24B Regiment, 304th NVA Division; the division headquarters and 1st VC Regiment, 2d VC Division; and the 64th Regiment, 320th NVA Division. The enemy supported the logistic network in the operational area with subordinate elements of the

559th Transportation Group. The elements, called Binh Trams (military stations), were responsible for the movement of infiltrating personnel and supplies through their areas of responsibility.(34) There were three Binh Trams located in the operational area of LAM SON 719. This factor had a significant impact on the operation since each Binh Tram controlled as many as three antiaircraft battalions with weapons ranging from 12.7 mm through 100mm. On February 8, 1971, it was estimated that total enemy strength was 22,000; 13,000 were in combat units and 9,000 in support. It was also estimated that the enemy possessed the capability to reinforce these units within two weeks with eight regiments.(35)

The combined operation was to be executed in four phases. Phase I, called Dewey Canyon II, required the 1st Brigade, 5th Infantry Division (Mechanized) to advance on D-Day, occupy the Khe Sanh area, and clear Route 9 to the Laotian border. The 101st Airborne Division (Airmobile) conducted diversionary attacks in the A Shau Valley from D-Day to D+4. The 45th Engineer Group (U.S.) was assigned the mission to repair Route 9 up to the Laotian border and to rehabilitate the Khe Sanh airstrip for C-130 use. During this phase, ARVN forces were to complete their movements to assembly areas and prepare to attack, on order, across the border into Laos.

In Phase II (see Appendix D) following a massive artillery preparation and B-52 strikes, the 1st ARVN Airborne Division, reinforced by the 1st Armored Brigade, was to launch the main attack along Route 9, repairing it as they progressed; three battalions of the airborne division were to air assault into Objective A Loui and two other fire support bases. Battalions of the 1st ARVN Infantry Division's 1st and 2d Regiments were to air assault into the Co Roc area to protect the corp's southern flank. The 1st

ARVN Ranger Group was to insert its three battalions by helicopter into blocking positions northeast of A Loui to protect the northern flank. Following this and seizure of Objective A Loui, the 1st Armored Brigade was to drive to Tchepone for link-up with the 3d Airborne Brigade which was to air assault into Tchepone. The Marine Brigades would remain in reserve at Khe Sanh.

Phase III, the exploitation phase, was to be initiated after successful link-up at Tchepone. The Airborne Division would search the Tchepone area while the 1st ARVN Infantry Division would search to the south. The 1st ARVN Ranger Group would continue to occupy blocking positions in the north. U.S. units would continue to provide fire support, helicopter support, and tactical air for ARVN units. Phase IV was the withdrawal phase to be conducted under one of two options. The U.S. mission during this phase remained unchanged. On January 22d, XXIV Corps and I Corps completed preparation of their operational orders. The plan was to be executed on January 30th.(36)

THE FIGHT

1st Brigade, (U.S.) 5th Infantry Division commenced operations exactly as scheduled, at 0001 hours, on January 30, 1971. The brigade advanced toward Khe Sanh and the Laotian border in two elements. Simultaneously, the (U.S.) 101st Airborne Division (Airmobile) conducted heavy attacks by fire and reconnaissance patrols into the A Shau valley to divert the enemy's attention. Beginning at 0830 hours, three infantry battalions of the 1st Brigade, (U.S.) 5th Infantry Division were airlifted into three

landing zones in the Khe Sanh area. All lifts were complete and each battalion in its assigned area by 1530 hours. For the next few days, the American units continued to clear Route 9, Khe Sanh, and the area up to the Laotian border without significant enemy contact. Between the 3d and 8th of February, all of the I ARVN Corps units redeployed to attack positions and assembly areas. The only significant incident which occurred during this period was an attack by a U.S. Navy aircraft on the ARVN forward elements that destroyed one M113 armored personnel carrier, killed six, and wounded fifty-one ARVN personnel. These were the first casualties of LAM SON 719.

The attack into Laos commenced on February 8th with eleven Arc Light (B-52) sorties flown against designated targets and to support troop landing zones. The 1st ARVN Armored Brigade Task Force advanced nine kilometers westward along Route 9 the first day. Three battalions of the 3d Regiment, 1st ARVN Infantry Division air assaulted into LZ's HOTEL and BLUE. Two battalions of the 1st ARVN Airborne Division air assaulted to Objectives 30 and 31, and one ranger battalion was inserted into LZ Ranger South. The ranger insertion was met with fire from 12.7mm antiaircraft machineguns, but the insertion was completed. Gunships supporting the operation engaged enemy fortified positions causing secondary explosions which lasted over an hour. U.S. gunships were also busy in the area northwest of LZ 31 where they engaged enemy armored vehicles - the first evidence of enemy armored units in the area of operations. Also on this day, 105mm howitzer batteries were airlifted into LZ's HOTEL, 30 and 31.

On February 9th, heavy rainfall precluded any air moves and no significant enemy contact was made. On February 10th, a battalion of the

1st ARVN Airborne Division was air assaulted into A Loui. The armored TF linked up with this battalion at 1555 hours. Also, a battalion of the 1st ARVN Infantry landed in LZ DELTA.

During the next ten days, the ARVN units continued to expand their search, finding numerous caches. During this period, ARVN units made increasing contact with the enemy. The 1st ARVN Infantry Division inserted two battalions into LZ's DON and DELTA. A ranger battalion air assaulted into LZ RANGER NORTH. Additional forces, artillery and supplies were air lifted into A Loui and other LZ's. Elements of the 3d Regiment, 1st ARVN Infantry Division and supporting artillery were lifted to fire base HOTEL II and LZ GRASS.

By February 19th, pressure increased on the northern flank of the penetration into Laos. The enemy continued attacks against the 39th Ranger Battalion in the RANGER NORTH area while isolating the 21st Ranger position at RANGER SOUTH by fire. On the afternoon of the 20th, reconnaissance aircraft reported an estimated 400 to 500 enemy troops encircling the 39th Battalion. At 1700 hours, radio contact with the 39th Battalion was lost. Two hundred had fought their way out and reached the 21st Ranger Battalion position. Due to the increasing enemy pressure, the decision to withdraw this force from RANGER SOUTH was made and executed on the 25th.

With the extraction of RANGER SOUTH, Fire Support Base (LZ) 31 received more frequent and intense attacks. Resupply and medical evacuation became increasingly more difficult. The availability of helicopter gunships became even more critical. At 1520 hours on February 25th, twenty tanks supported by infantry attacked Fire Support Base 31 after an intense artillery barrage. Four minutes later the base was

overrun. The commanders of the 3d Airborne Brigade and 3d Artillery Battalion were captured although a number of troops managed to break out. ARVN losses at Fire Support Base 31 totalled 155 killed and missing. The enemy lost an estimated 250 killed and eleven PT-76 and T-34 tanks.

General Lam, I Corps (ARVN) commander, sensed that his attack was bogging down and the enemy reaction was growing stronger. He, therefore, made the decision to regain the initiative by orienting on the original objective of Tchepone. By repositioning forces in the Quang Tri area, the Marine brigades were moved forward to occupy Fire Support Base HOTEL and Fire Support Base DELTA. The 1st ARVN Infantry Division was ordered to seize Tchepone. Between March 3rd and 6th, the 1st ARVN Division completed a series of air assaults toward the town by using the escarpment just south of Route 9. The air assaults were conducted successively into LZ's LOLO, LIZ and SOPHIA WEST.(37) Although all of these landing zones were occupied successfully, enemy opposition at LOLO was so strong that landings had to be aborted twice to allow for additional preparatory fires. When the 1st Battalion of the 1st Regiment landed, the insertion had cost eleven helicopters shot down and forty-four hit by gunfire. The final objective of Tchepone was now within reach.

On March 6th, 120 helicopters were assembled at Khe Sanh to conduct the air assault of two battalions into LZ HOPE, north of Tchepone. An extensive preparation was conducted by B-52's and various tactical aircraft. Elements of the 2d Squadron 17th Cavalry reconnoitered targets, prepared landing zones and covered the assault. An enemy attack by fire into the Khe Sanh area where the helicopters were staged forced them to depart ninety minutes early. This was unimportant due to the careful

planning and detailed coordination conducted earlier. By 1343 hours, both battalions and the regimental command post had landed safely at HOPE. According to General Tolson, "This large combat assault was carried out in what was considered to be the most hostile air defense environment ever encountered in the entire war, yet only one Huey was hit and it made a safe landing in the objective area."(38) Both battalions immediately attacked south and west, occupying the town. In the process these units uncovered large caches of rice, weapons, gas masks, and equipment as well as hundreds of enemy dead resulting from the B-52 strikes.

Concerned about the deteriorating weather and heavy enemy reinforcements, the I Corps (ARVN) Commander decided to execute a timed withdrawal from Laos beginning on March 19th. New enemy forces were executing heavy pressure throughout the area. Ground forces frequently had to move overland to alternate pick up zones due to the enemy situation. Antiaircraft fires throughout the area became even more intense. The last elements of the 1st ARVN Infantry Division were extracted on March 21st. The last ARVN forces departed Laos from Fire Support Base HOTEL on MARCH 24th. The initial test of the Vietnamization process had ended.

The balance sheet for LAM SON 719 is difficult to assess accurately. In order to counteract the ARVN incursion, the enemy built his forces up to five divisions, twelve infantry regiments, at least two battalions of an armor regiment, and at least nineteen antiaircraft battalions. Enemy losses in personnel were estimated at 20,000 or 50% of the total force involved. Equipment losses included over 5,000 individual weapons; more than 1,500 crew served weapons; 20,000 tons of ammunition; 1,200 tons of rice; over ninety tanks; more than 100 artillery and mortar pieces and 422

trucks. Friendly losses in personnel were 215 killed and thirty-eight missing for the U.S. forces, and 1,764 killed plus 689 missing for the ARVN forces. The most significant equipment losses to the ARVN force included eighty-seven combat vehicles, fifty-four light tanks, ninety-six artillery pieces, thirty-one bulldozers and over 1,500 radio sets. For the U.S. forces, the most noteworthy equipment losses resulted from flying over 90,000 sorties at a cost of 108 helicopters destroyed.

The termination of LAM SON 719 brought mixed results. The operation had been severely curtailed; originally designed to last ninety days, it ended in forty-five days. Many felt that the operation fell short of the real exploitation which was desired to the west of Tchepone. As in many other instances in Vietnam, when the operation in Laos was completed, the enemy was detected re-establishing his defense in the very base areas which he had so recently vacated.(39)

DOCTRINAL PRINCIPLES DERIVED FROM LAM SON 719

The immediate significance gained from LAM SON 719 was the total disruption of activity within Base Area 604 in Laos. During the operation, all logistic operations in the area ceased. An additional benefit was derived from this since February and March were usually the most favorable time for resupply prior to the monsoon season. Also, detailed intelligence was gained regarding the network of stations along the Ho Chi Minh Trail. This would increase the effectiveness of air strikes in the future. In addition, Colonel Palmer points out that,

> The most far-reaching result of LAM SON 719 was to delay for nearly a year the possibility of an invasion by North Vietnam. Replacing men and equipment chewed up in the futile effort to wipe out the Southern columns would take Hanoi the remainder of 1971. Saigon had gained still more time to develop and prepare. Vietnamization would not have to face its test that year.(40)

Whatever conclusions were drawn regarding the operation, one common thread binds all after action comments, summaries, reports, articles and books - without U.S. support, specifically airmobile, the Vietnamese would not have completed the mission. The Army aviation units involved had faced the most intense air defense environment encountered by Army helicopter pilots to date in the war and there were many lessons learned as a result.

A key element to the successful employment of aviation assets during LAM SON 719 was derived from detailed planning and coordination conducted prior to execution of each airmobile operation. Several meetings and briefings were held daily using the guidance established by the I ARVN Corps Commander. After a review of the previous day's events and the planned operations, he

would approve an allocation for support. Both ground and aviation commanders then set out to employ the available assets. At the conclusion of daily operations, an evening briefing began the planning process for the following day. Aviation battalion commanders attended these situation briefings and normally received twenty-four hours notification of a planned operation. Upon receiving this concept of operation, supporting units were notified so that the designated Air Mission Commander and Ground Commander could formulate their plans. This planning process was continuous until execution. Although aviation units are extremely flexible, a detailed planning process, such as that used during LAM SON 719, insures that maximum benefit is derived from their use.

The planning of flight routes assumed increased importance during the operation as it continued toward Tchepone. Routes were selected to capitalize on friendly positions in the event of bad weather or forced landings. They were also chosen to avoid known enemy positions. These routes were continuously varied and changed based on the tactical situation. The selection of routes was normally keyed to recognizable terrain resulting in the Xe Pon River valley becoming a natural route, especially during poor weather.

The proper flight altitude was just as critical as route selection due to the intense antiaircraft threat. During most operations in South Vietnam, aircraft safely operated at 1500 feet above ground level. Aviators quickly learned to adjust this altitude during LAM SON 719. Optimum altitudes between 4,000 and 6,000 feet above ground level were flown to prevent losses to small arms and 12.7 mm machine gun fire.

This optimum altitude did not prove viable in all situations. The enemy had employed "hugging" tactics by moving within ten to twenty meters of a

perimeter or friendly position. The enemy's proximity exposed friendly units to an unacceptable level of risk as they would attempt to employ attack helicopters or tactical air support. The enemy also gained the advantage of placing accurate fires into the landing zones. As a result, aviators used nap of the earth or low level flying techniques as they approached friendly positions. This method of flight places the aircraft as close to the earth's surface as possible. This flight technique would present only a fleeting target to the enemy and also gain surprise by the sudden appearance of an aircraft.

Prior to LAM SON 719, various different sizes and types of aircraft formations were used. The lack of large, suitable landing areas, coupled with the enemy's tactics caused the aviators to adjust their formations. The loose trail formation was widely used during the operation to reduce vulnerability to antiaircraft fires. Although tight formations had been used in the past for security, navigation, and suppressive fires by door gunners, this method increased the possibility of several aircraft being hit during an engagement. A majority of landing zones throughout the area were only large enough for one or two ship touchdowns. The units compensated for this by establishing at least thirty second separation between aircraft or groups of aircraft. All of these techniques reduced the possibility of a loss of more than one aircraft to a single engagement.

A significant amount of planning entered into the selection of pickup zones and landing zones. The potential of hostile fire dictated that every mission, regardless of type, size or number of aircraft, be planned and executed as a combat operation complete with reconnaissance and fire support. Aviators preferred going into new LZ's as opposed to "secure" LZ's since their use of firepower would be unrestricted. During LAM SON 719, both ground and aviation commanders learned that the use of new or not previously

used pickup zones enhanced success and created fewer casualties. Whenever a unit was to be extracted, the ground commander would move to a new location to prepare the site for pickup. This reduced the enemy's ability to direct fires into the area. This concept also worked for landing zones. The use of B-52 strikes to construct landing zones as opposed to the use of natural areas greatly increased the ability of the unit to get on the ground with minimum losses.

Thorough and detailed reconnaissance was an integral component of all aviation operations conducted during LAM SON 719. Air cavalry units performed the reconnaissance with no smaller than a troop size unit for each assault or extraction. These units performed reconnaissance as much as three or four days prior to a planned air assault. The air cavalry commander directed his unit over a wide area in order to deny the enemy information pinpointing the actual landing zones or routes to be used. During this early reconnaissance, enemy positions, such as antiaircraft sites, were destroyed by using Air Force assets. The results of this continuous reconnaissance were passed to the air mission commander and the ground commander. Once the primary landing zones, approach and departure routes, and alternate areas were selected, the air cavalry unit provided suppressive fires on the day of execution. Close coordination with the artillery and Air Force was conducted by the air cavalry commander. Based on a final reconnaissance, the ground and air mission commanders were informed of the tactical situation and, if needed, any recommendations for changes. A change such as this occurred during approach to LZ SOPHIA, requiring an additional hour of preparatory fires prior to landing of the assault elements. Air cavalry units played a major role in the execution of all air assaults.

During the execution of these air assaults, the decision whether to continue or to break off the assault, when friendly forces were confronted by serious enemy contact, was very difficult to make. In order to assist in making this decision, there was normally a senior commander involved in the critical phases of the operation. This alleviated the burden from either the air mission commander or the ground commander to make this difficult decision while in the middle of heavy contact. Both subordinate commanders would make recommendations to the senior commander, but, ultimately he made the decision. The resumption of a combat assault was affected by altering the condition which caused the break. Often, additional firepower was applied, or routes were altered, and occasionally, alternate landing zones were used.

The ability to recover downed crews was integrated into every mission. A planning figure of one chase aircraft for every ten troop lift helicopters was developed. However, when a mission was considered extremely difficult, the ratio was changed to 1:5. The best time to rescue a downed crew proved to be immediately after the aircraft had gone down and prior to any enemy reaction.

Finally, the demand for armed helicopters during LAM SON 719 resulted in this asset being the limiting factor on when and where missions would be conducted. It was imperative that armed escort be provided not only during combat assaults but also during single ship missions as well. The use of attack helicopters in tank engagements placed more demand on these aircraft. The results of these engagements would have far ranging implications for the future development of airmobility doctrine.(41)

The results of LAM SON 719 could have been used to forecast the unfortunate destiny of the ARVN forces operating without their U.S. counterparts. However, the implications for Army aviation would be realized in the near future.

SECTION IV

POST-WAR DEVELOPMENTS

THE WAR'S INFLUENCE ON DOCTRINE

The Vietnam War had a negative impact on the U.S. Army's tactical airmobility doctrine. The Army departed that conflict with a doctrinal manual which failed to capitalize on the numerous techniques and procedures learned during combat. Its immediate focus turned toward Europe, simultaneously disregarding the valuable experience gained in a war against an elusive enemy in Indochina. Army aviation focused on the employment of attack helicopters to the detriment of airmobility doctrine as a whole.

Just as it appears that the U.S. Army aviation doctrine writers incorporated aviation's early Vietnam combat experience into the 1967 version of FM 57-35, the opposite seems to be true of the authors of the 1971 edition. This manual, coincidentally published on the same day that the brave men of the 101st Airborne Division (Airmobile) were extracting the last Vietnamese from Laos, inexplicably omitted many of the details necessary for a successful airmobile operation which had been either included in the 1967 edition or learned since. Previously published details on reconnaissance had been reduced to a very small paragraph. All of the helpful diagrams and sketches regarding landing zones, aircraft formations, and battle drills were removed. The annexes with checklists and orders had been replaced by a discussion of the roles of attack helicopters. It is possible that the authors envisioned changes to follow throughout the decade. The highlight of this manual was a

chapter added to discuss combat service support incident to airmobile operations.

Upon withdrawing from Vietnam, the United States began to reassess its global commitments. For the U.S. Army, this meant a return to conventional warfare. Instead of capturing the valuable lessons of that war, the Army had to deal with serious manpower, morale and leadership problems. Emphasis on basic military operations contributed to the neglect of the Vietnam experience. In 1973, the Middle East War revealed that the next war would be more lethal than any conflict for which the Army was prepared. This conflict accelerated the Army's emphasis on the mid to high intensity battlefield of Europe. The development of organizations relied on mechanized and armored formations due to their mobility and firepower.(42) For Army Aviation, the attack helicopter would receive all the attention while the lessons of airmobility learned in Vietnam faded like a bad dream.

ORGANIZATIONAL STUDIES

During the decade following the 1973 Arab Israeli War, a myriad of studies and evaluations were conducted to assess the needs of Army Aviation. As the Army evaluated itself and worked toward developing an improved organization for a conflict on the European battlefield, so did the aviation community. In 1974, the "Aviation Requirements for the Combat Structure of the Army III" (ARCSA III) was initiated. This comprehensive study was directed to evaluate and develop requirements for the structure of Army aviation in combat with integration into the combined arms team. Of course, primary emphasis was given to the most effective use of attack helicopters. The final report, published in 1977, made several recommendations regarding

attack helicopters and their need to combat the Warsaw Pact threat. Also, a concept of pooling the divisional aviation assets under a Combat Aviation Battalion was recommended and later implemented.(43)

In August 1978, General Donn A Starry, as TRADOC Commander, initiated a study for redesigning the structure of the Army with emphasis on the heavy division.. Focused strictly on the NATO environment, the organizational designs were targeted for 1986. "Target servicing" was the key to mission accomplishment. The flexible nature of aviation forces would be critical to destruction of the enemy. A year later, the Air Cavalry Attack Brigade would come into existence. The results of five different studies, all geared toward Europe, had come to fruition.(44)

Numerous other tests were conducted to evaluate the survivability of attack helicopters including TAC EVAL I in 1977, JAWS I and II also in 1977, TASVAL in 1979 and J-CATCH which has been ongoing since 1976. Not only has tank killing been brought to the forefront, but, in recent years air to air combat with helicopters has also drawn a lot of attention.

Considering all of the emphasis on attack helicopters, it is important to be reminded of a warning given by Lieutenant General Harry W.O. Kinnard (Ret.) in a 1980 Aviation Digest article on airmobility,

> My caution is that we must continue to think of Army Aviation and airmobility as being all inclusive of the five functions of combat. If we stress attack helicopters while forgetting their airborne means of support inherent in the other four functions of combat, we will never develop the full potential of our attack helicopters and besides we will overlook the enormous potential of a fully rounded airmobile force. (45)

CURRENT AIR ASSAULT DOCTRINE

Following publication of the 1971 edition of FM 57-35, it took the Army fully nine years to publish an updated manual for airmobile operations. The current manual, FM 90-4, Airmobile Operations, was published on October 8, 1980. It is an improvement over the 1971 edition since many details deleted from the previous manual were restored once again. Although it is a comprehensive guide, there still remains much room for improvement.

All of the detailed planning and coordination performed during LAM SON 719 receives the attention of one chapter. The manual recognizes four phases of an airmobile operation - loading, air movement, landing, and ground operations. The planning considerations for each of these phases is treated to its own section. The discussion of responsibilities falls far short of the mark necessary to provide an understanding of just who does what in the sequence. Short paragraphs address division and then battalion responsibilities without any regard to the brigade level. It is time to be specific about tasks to be accomplished at each level, which should include the combat aviation brigade. The 101st Aviation Group performed just as a brigade would today. It is important to include it among the organizational responsibilities. Just as the group planned and allocated resources during LAM SON 719, so will a brigade today. This chapter also addresses the factor of planning time, but it doesn't provide guidelines. How long does it take to plan a battalion air assault? How about a company size lift? Commanders today do not need specifics; however, guidelines are always useful.

The extensive reconnaissance and preparation of the operational area prior to an assault is not adequately addressed anywhere in the manual. At times, three to four days of air cavalry reconnaissance was performed during

LAM SON 719. Although the manual indicates various means for selecting routes, pickup zones, and landing zones, the important use of air cavalry for this task is understated. In order to provide a better guide, this manual needs to thoroughly discuss the employment of air cavalry in conjunction with the planning process for an airmobile operation.

The selection and designation of flight routes and altitudes receives extensive coverage. All of the important aspects of flight routes are discussed in detail. The lessons of avoiding enemy positions, maximizing terrain, and using recognizable features in the event of poor weather are all addressed. Also, factors affecting flight altitude are itemized. One apparent inconsistency in the manual is the statement that "the greater the threat air defense, the lower the flight altitude." If this were true then all flights during LAM SON 719 would have been conducted at nap of the earth. This factor is stated in too general a concept. This issue is so sensitive to the aviation field that a separate field manual (FM 1-101, Aircraft Battlefield Countermeasures and Survivability) is used to discuss survivability. Some of the cogent aspects of altitude selection versus air defense threat should be incorporated into the airmobile manual. This would afford the ground commander a better understanding of techniques.

The section which addresses the landing phase is particularly useful and has certainly incorporated many previous lessons. A preponderance of the section details the factors necessary for landing zone selection and utilization. Once again, references are made to the enemy disposition, terrain, and weather. The early lessons of Vietnam regarding the tradeoff of landing too near or too far from an objective are discussed. There is a discussion, with accompanying appendix, covering landing formations and battle drills; however, it seems to be dated with respect to the Vietnam

experience and current practice. As indicated during LAM SON 719, the formation adopted as the standard was loose trail. Today, most combat aviation units employ a formation called "tactical cruise". In essence, it is the same as loose trail and minimizes aircraft vulnerability. The current manual still refers to various "old style" formations once used but now obsolete. This needs to be updated to take advantage of a lesson learned and to coincide with current procedure.

Several other aspects of landing zones are not addressed in the manual. There is no discussion regarding the possible need to construct landing zones as occurred during LAM SON 719. What appears to be a good landing zone to U.S. forces will also be obvious to the enemy. The use of B-52 strikes provided areas previously not available. The authors of the manual may have been thinking of the plains of Europe and not the jungles of some underdeveloped nations. Additionally, the use of smoke to conceal landing areas was often used in Vietnam, but, not fully discussed in today's manual. This may be possible because, other than artillery or air, the capability to smoke an area by using a helicopter has been lost. Currently, UH-60's and much of the UH-1 fleet do not possess the capability to provide a smoke screen as aircraft once did in Vietnam.

Other significant lessons not incorporated in the current manual include the use of liaison officers and breaking off a combat assault. During much of Vietnam, including LAM SON 719, aviation units sent LNO's to the ground units to insure close, continuous coordination. The use of liaison officers receives inadequate attention in today's manual. Many operations have been successful due to the efforts of a young lieutenant or warrant officer acting in the capacity of an LNO. Also missing from the manual is the key discussion of that difficult decision concerning when to break off an

insertion. This topic certainly deserves outlining since the enemy will rarely cooperate with any planned assault. Just the mention of several methods which may be used to continue an aborted assault will benefit commanders.

In general, it is fair to state that today's manual is adequate but not complete. There is an entire chapter devoted to the threat needlessly since the Army has published a three volume set on threat organization, tactics, and operations. These pages may be better served by citing historical examples of successful and, perhaps, unsuccessful airmobile operations. Another possibility may be using part of the manual to completely discuss in detail a specific air assault operation from beginning to end in a given scenario.

In many ways, the current manual leaves too much latitude for interpretation. This is beneficial for a manual which is supposed to be a guide for action, but only up to a certain point. Is it not possible that the 101st Airmobile Division could be using techniques which are totally different from the 82d Airborne Division, and this unit even different from the 2d Infantry Division? Should not the airmobile doctrine for the Army include the best tactical techniques and procedures for use by all divisions? The manual should, indeed, incorporate the best techniques and practices, especially those which have been tested in combat.

CONCLUSION

Prior to America's involvement in the Republic of Vietnam, the development of airmobility was still in its early stages. Aviation units deployed to that war only to experiment with different methods of conducting airmobiles. That entire conflict caused a severe stagnation of trends and ideas toward our commitment in Europe. In order to turn the entire process around, complete emphasis has been placed on the mid to high intensity war of Europe. All of this occurred to the detriment of the valuable experience gained during the war in Vietnam. All of the tests and studies conducted during the post-Vietnam era have been geared to mechanized and armored formations with specific emphasis for aviation on attack helicopters. The whole concept of an airmobility team has been neglected but has the potential to be fostered once again.

Sufficient time has passed and all the wounds have healed enough to the point where a need exists to open the books to the Vietnam War. Many of the battalion and brigade commanders in that war are the senior leaders of our Army today. They are in a position to educate the professionals of the Army about the successes and failures of the war and why they occurred. There are many forums which can be used to capitalize on their experience with the employment of aviation assets during Vietnam.

As for the Vietnam experience itself, no one can deny that the U.S. Army performed all of its tactical operations extremely well. The employment of airmobility was a major tactical innovation of that war. An infinite number of air assault operations were conducted and they all serve as a valuable source of learning for today and the future. LAM SON 719 is only one of

these, yet a myriad of lessons may be drawn from a study of its conduct. Every operation in Vietnam contains doctrinal lessons which must be studied today. As was pointed out earlier, many people mistake the Vietnam War as, simply, a low intensity conflict. LAM SON 719 should serve to awaken these individuals to the fact that aviators in that war faced an extremely hostile air defense environment.

In light of the benefits which can be derived from the Vietnam experience, it appears that the current doctrine falls short. A combination of maintaining a mid to high intensity focus, coupled with a very general guide for application in that setting has not taken advantage of important combat lessons. It is extremely important that the current doctrine be updated to incorporate these lessons, as well as, today's organizational and equipment changes.

Many years have passed since the Army exited Vietnam, but in a way, not a lot has changed. U.S. interests lie in many regions of the world today where the enemy force will fight in much the same manner as the North Vietnamese. Although many lessons discussed in this paper may seem basic considering the advanced stage of the Army; one can find in the recent operation in Grenada mistakes that were made twelve years ago. The lessons derived from our Vietnam experience do have application today.

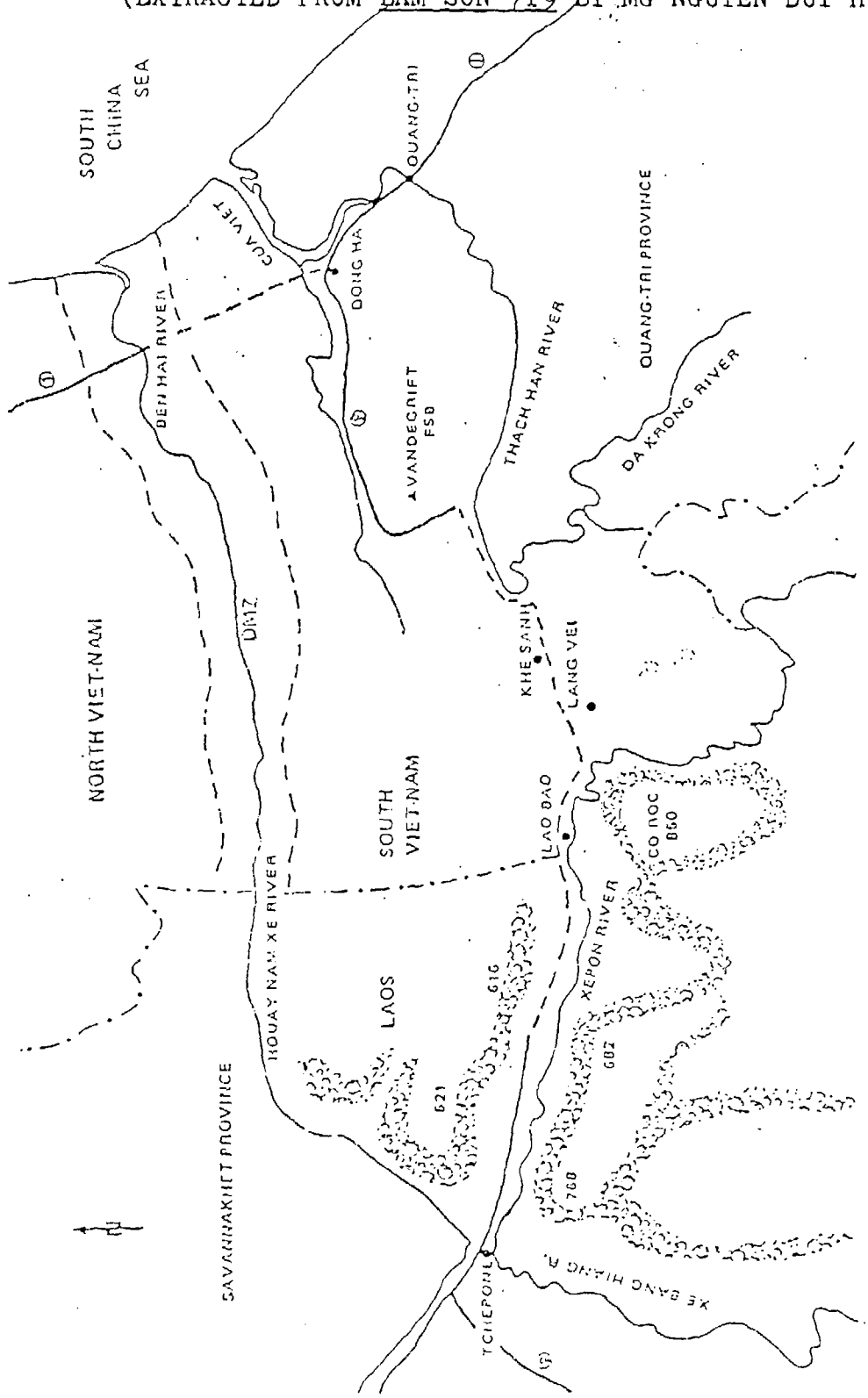
The Army today is preparing for the least likely, most dangerous eventuality, but the most likely conflict receives much less priority. It is imperative that a Light Infantry Division, or any unit, not be committed to a conflict to relearn the lessons of the past. As General George C. Marshall stated, "We remain without modern experience in the first phases of a war and must draw our conclusions from history."(46)

APPENDICES

APPENDIX A

THE AREA OF OPERATION

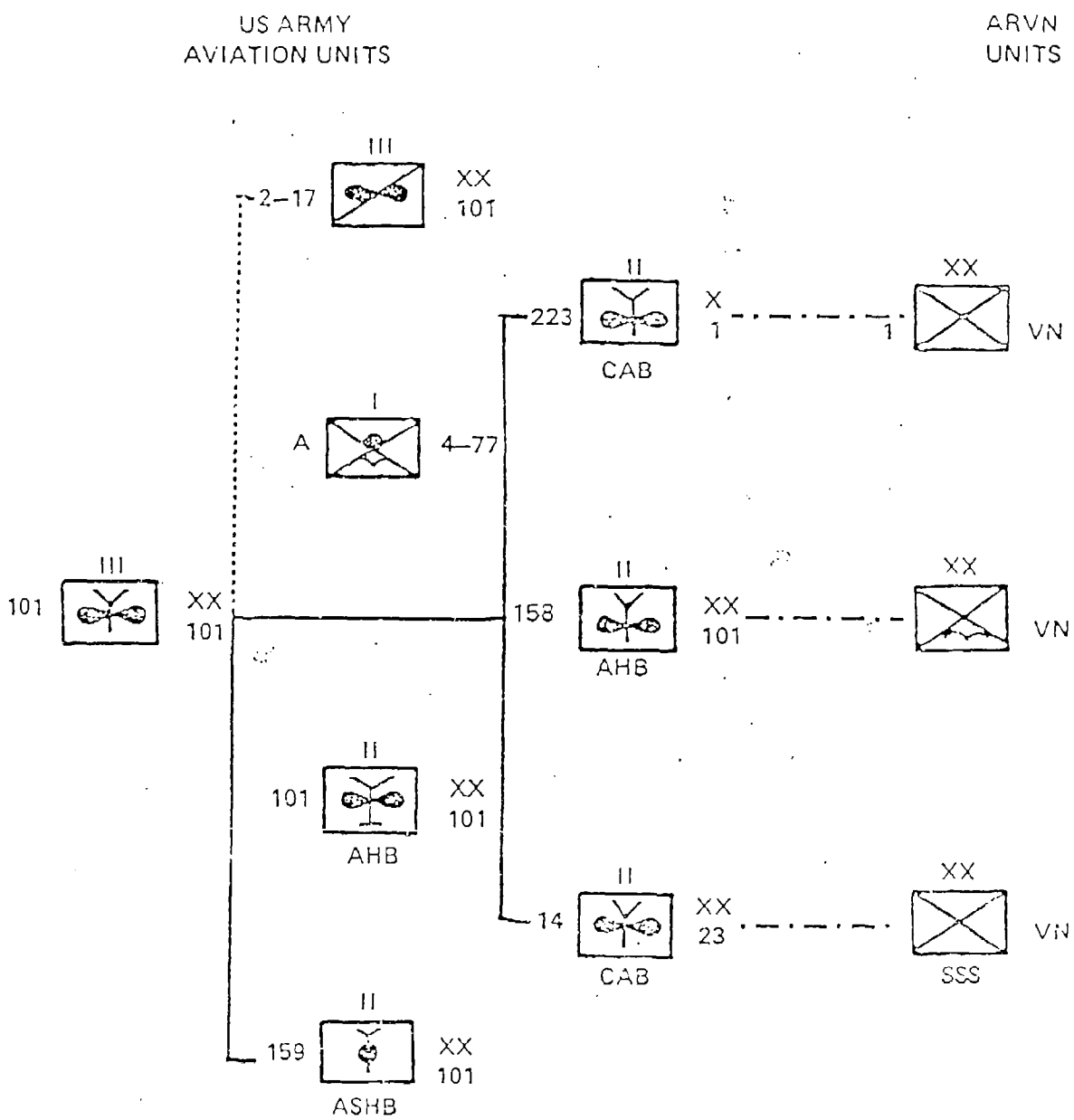
(EXTRACTED FROM LAM SON 719 BY MG NGUYEN DUY HINH)



APPENDIX B

U.S. ARMY AVIATION TASK ORGANIZATION

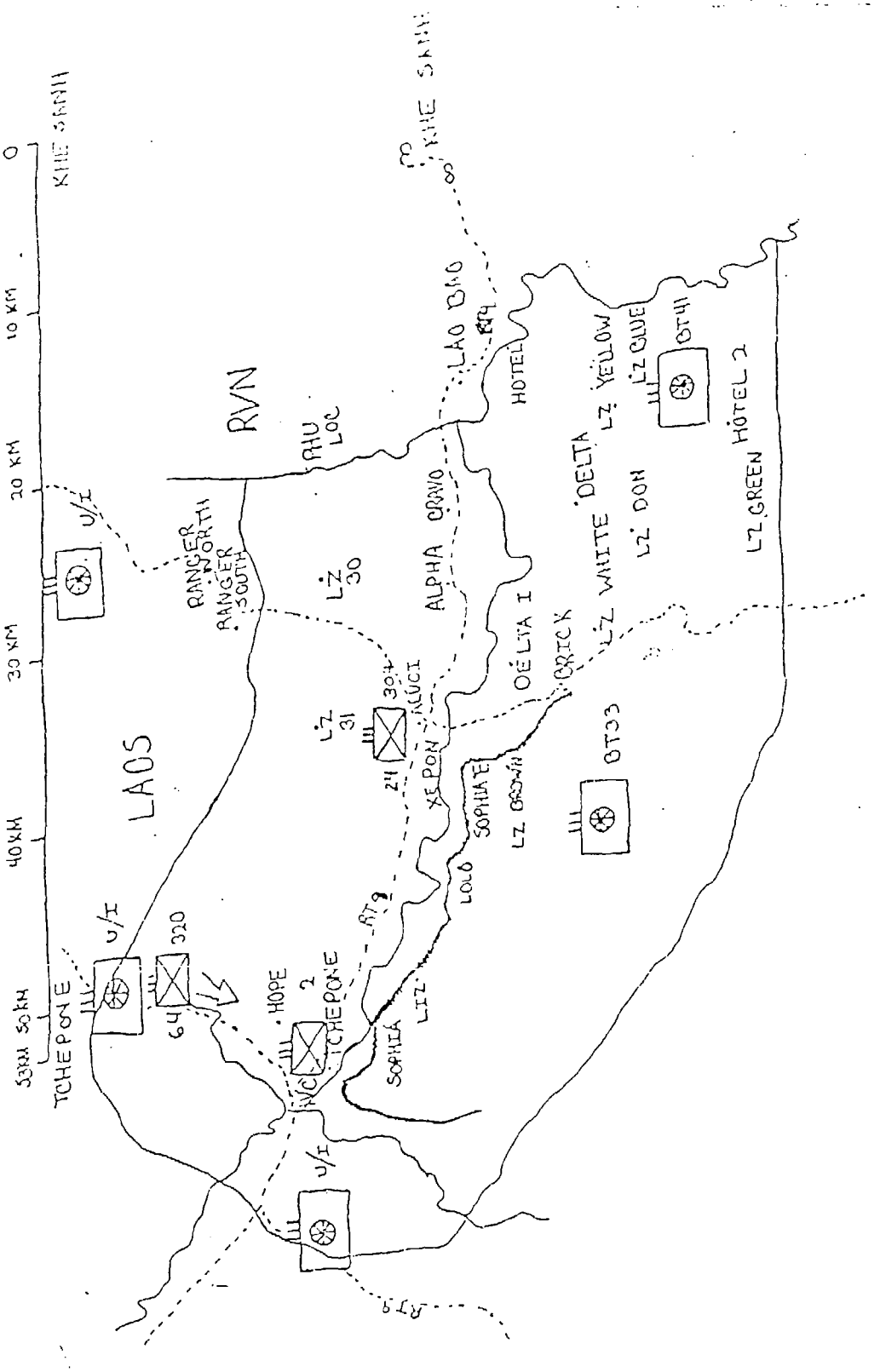
(EXTRACTED FROM MULTIPLE SOURCES)



APPENDIX C

ENEMY SITUATION

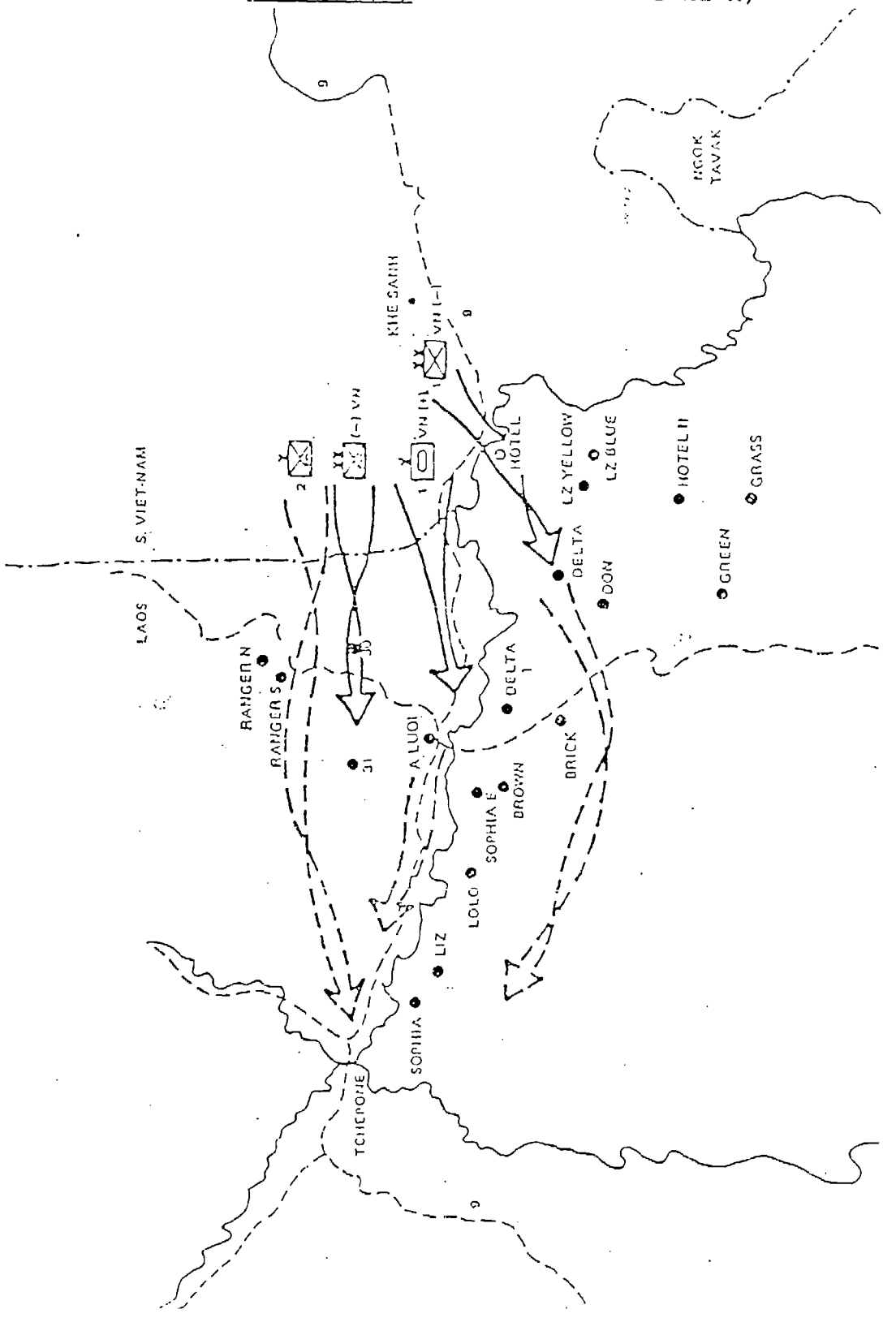
(EXTRACTED FROM FINAL REPORT - 101ST ABN DIV (AMBL)



APPENDIX D

OPERATION PLAN - PHASE II

(EXTRACTED FROM LAM SON 719 BY MG NGUYEN DUY HINH)



ENDNOTES

ENDNOTES

1. Earl R. McClendon, Army Aviation, 1947-1953 (Alabama: Air University, 1954), p. 3.

2. William K. Kay, "The Army Aviation Story," U.S. Army Aviation Digest, 7 (June 1961) :1-2.

3. Among the visionaries are Colonel Jay D. Vanderpool, Chief of Combat Developments at the U.S. Army Aviation School, 1956, who pioneered the armed helicopter concept. Also Major General James M. Gavin, Army Staff G-3, who fostered early ideas of air cavalry and Major General Hamilton H. Howze, Director of Army Aviation, who conceptualized completely airmobile units.

4. According to FM 1-100, Combat Aviation Operations, an air assault operation is an operation in which assault forces (combat, combat support, and combat service support), using the firepower, mobility, and total integration of helicopter assets in their ground or air roles, maneuver on the battlefield under the control of the air or ground commander to engage and destroy enemy forces.

5. Shelby L. Stanton, The Rise and Fall of an American Army, (California: Presidio Press, 1985), p. 368.

6. General Donn A. Starry, "A Tactical Evolution - FM 100-5," Military Review, 58 (August 1978) :4.

7. Dave Richard Palmer, Summons of the Trumpet, (California: Presidio Press, 1978) p. 341.

8. John J. Tolson, Airmobility, 1961-1971 (Washington, D.C.: U.S. Government Printing Office, 1973), p. 9.

9. LTC Donald F. Harrison, "Developments in Airmobility in the United States Army," U.S. Army Aviation Digest 15 (June 1969) :23.

10. Robert S. McNamara, "The Prospects for Army Airmobility," Army 13 (March 1963) :20.

11. Tolson, p. 24.

12. Colonel Bryce Denno, "Sure Wins 1 and 2," Army 13 (June 1963) :43-47.

13. Tolson, p. 52.

14. John R. Galvin, Air Assault: The Development of Airmobile Warfare (New York: Hawthorne Books, 1969), p. 281.

15. Tolson, p. 56.

16. Ibid., p. 61.

17. Galvin, p. 289.

18. Colonel Robert S. Keller, "Tactical Airmobility is the Answer," U.S. Army Aviation Digest 15 (July 1969) :7.

19. Stanton, pp. 56-60.

20. Tolson, pp. 82-83.

21. LTC (RET) Thomas J. Sabiston, "Army Aviation Operation in Vietnam," U.S. Army Aviation Digest 9 (January 1963) :15.

22. Tolson, p. 28.

23. Ibid., p. 28.

24. Ibid., pp. 36-37.

25. Palmer, pp. 280-281.

26. General Nguyen Duy Hinh, Lam Son 719 (Washington, D.C.: U.S. Army Center of Military History, 1984), p.7.

27. Stanley Karnow, Vietnam: A History (New York: Penguin Books, 1984), p. 610.

28. The Ho Chi Minh Trail was a complicated network of trails and roads through the Laotian panhandle and Cambodia ending in numerous regions of South Vietnam. Originally used by the Viet Minh as a communications system in their struggle against the French, the North Vietnamese developed this once simple trail into a major logistical structure. Used by the North to infiltrate large quantities of supplies, equipment, and men, the trail system was improved to include medical, supply and maintenance facilities. The network became so sophisticated that a pipeline was installed to support extensive vehicular movements.

29. According to several sources Lam Son, a village in North Vietnam, is the site where Le Loi, an almost legendary Vietnamese folk hero, inflicted a resounding defeat on an invading Chinese Army in 1427.

30. USARVN, Final Report - Airmobile Operations in Support of LAM SON 719 (HQ, 101st Airborne Division (Airmobile), 1971), vol. II: p. I-1.

31. Ibid., pp. I-6, I-7.

32. The organic units of I (ARVN) Corps included:

1st ARVN Infantry Division (two regiments with eight battalions and Division Artillery)
1st ARVN Ranger Group (three ranger battalions, one battalion)
1st ARVN Armored Brigade (three cavalry squadrons)

10th ARVN Engineer Group (two engineer battalions)

33. The major units assigned to XXIV (U.S.) Corps were:

101st Airborne Division (Airmobile)
11th Brigade, 23d Infantry Division (one infantry battalion, one cavalry squadron, one artillery battalion)
1st Brigade, 5th Infantry Division (Mechanized) (one cavalry squadron, one artillery battalion)

34. Each Binh Tram had a mix of attached transportation, engineer, medical, communication, liaison, and antiaircraft battalions. They each had up to a battalion size infantry forces assigned for security and all other units had a secondary mission to fight as infantry.

35. 101st Final Report, pp. A-15, A-16.

36. Hinh, pp. 36-40.

37. Several sources indicate that English names were chosen for objectives, firebases and the like to facilitate communications between the ARVN units and the supporting U.S. forces.

38. Tolson, p. 242.

39. A majority of the information in the section entitled "The Fight" has been extracted from the 101st Final Report and Hinh's LAM SON 719.

40. Palmer, p. 308.

41. The lessons discussed in the section entitled, "Doctrinal Principles Derived from LAM SON 719" were extracted from the 101st Airborne Division (Airmobile), Final Report.

42. Major Robert A. Doughty, Leavenworth Papers: The Evolution of U.S. Army Tactical Doctrine, 1946-1976 (Ft. Leavenworth, Ks: Combat Studies Institute, 1979), pp. 40-46.

43. Major Carlton L. Hood, "Determining the Optimum Aviation Organization for the Operational Level of war" (MMAS thesis, Ft. Leavenworth, Kansas, 1984), p. 40.

44. Ibid., pp. 42-45.

45. LTG (RET) Harry W.O. Kinnard, "Airmobility Revisited," U.S. Army Aviation Digest 26 (June 1980) :5.
Kinnard indicates that the five functions of combat are: mobility, firepower, logistics, intelligence, and command, control and communications.

46. George C. Marshall, "Profiting by War Experiences," The Infantry Journal 18 (January 1921) :37.

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